

Application Serial No.: 09/672,360
Amendment dated: 08/02/2004

Reply to Office action of: 05/07/2004
Attorney Docket No.: ARC920000091 US1

REMARKS

Applicant respectfully submits that all the claims presently on file are in condition for allowance, which action is earnestly solicited.

THE CLAIMS

Claim Rejection under 35 USC 102

Claims 1-9, 19-31, and 33-39 were rejected under 35 U.S.C. 102(a) as being anticipated by De La Huerga, US patent 5,960,085. Applicant respectfully submits that De La Huerga does not disclose all the elements and limitations of the rejected claims. Consequently, claims 1-9, 19-31, and 33-39 and the claims dependent thereon are not anticipated under 35 U.S.C. 102, and the allowance of these claims is earnestly solicited. In support of this position, Applicant submits the following arguments:

A. Terial Standard for Lack of Novelty (Anticipation)

The standard for lack of novelty, that is, for "anticipation," is one of strict identity. To anticipate a claim for a patent, a single prior source must contain all its essential elements, and the burden of proving such anticipation is on the party making such assertion of anticipation. Anticipation cannot be shown by combining more than one reference to show the elements of the claimed invention. The amount of newness and usefulness need only be minuscule to avoid a finding of lack of novelty.

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The following are two court opinions in support of Applicant's position of non anticipation, with emphasis added for clarity purposes:

- "Anticipation under Section 102 can be found only if a reference shows exactly what is claimed; where there are differences between the reference disclosures and the claim, a rejection must be based on obviousness under Section 103." *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).
- "Absence from a cited reference of any element of a claim of a patent negates anticipation of that claim by the reference." *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986), on rehearing, 231 USPQ 160 (Fed. Cir. 1986).

B. Brief Summary of the Present Invention

Prior to presenting substantive arguments in favor of the allowability of the claims on file, it might be desirable to briefly review the present invention. The present invention generally relates to the use of personal encoded identification media for providing time-limited access to people, objects, information, services, and other resources.

A specific feature of the time-limited tracking system is to provide concurrent time-limited access to a large number of people, objects, information, services, and other resources that are collectively referred to as "resources". For example, the time-limited tracking system allows persons to be tracked only during predetermined (or selected) hours, such as regular business hours, but not during undesirable (or unavailable) hours, such as lunch or break times. This will allow privacy of movement during the employee's personal time.

Alternatively, the time-limited tracking system could be automatically tied to events in a person's or group's calendar, to allow tracking during important

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meetings or phone calls, so that an assistant might try to locate individuals during these important events.

The foregoing and other objects and features of the present invention are realized by a time-limited tracking system that includes a transmitter module incorporated in an ID badge, card, or label, and a receiver module incorporated in a secure server. The transmitter module contains a microprocessor and a watch crystal that keeps track of time. The microprocessor encrypts time with a private, non-public key, and transmits the encrypted time once every ten seconds. The transmission can be any wireless means, including infrared, radio frequency, electric field, magnetic field, ultrasonics, and so forth. The limited tracking system is capable of individually tracking a large number of receivers that are distributed about one or multiple tracking environments or ranges.

The secure server stores the private keys of all the users (or receivers). The user of the badge can give a third party, or multiple parties, referred to herein as finder, access to the user for specified time periods. As an example, if the user wishes to give the finder tracking access for specific time periods, the user instructs the server to deliver a list of encrypted codes with the user's private key for these time periods. This list can be transmitted or otherwise provided to the finder for storage on the finder's own server. When the finder detects a transmission from the user's badge, the finder's server looks up the current value of the user's badge from the list and compares it to the encrypted code it received from the badge. If a match exists, the finder would have identified and located the user.

The present invention sends the encrypted temporal sequence that

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appears to the observer as a random number, and which does not contain a public ID, thus preventing an observer from identifying and tracking the location of a badge.

C. Independent Claim 1 in Light of De La Huerqa

The following claim chart lists the elements of claim 1, the rejection grounds made by the Examiner, and the outline of Applicant's arguments.

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CLAIM CHART

| CLAIM 1 | EXAMINER'S REJECTION GROUNDS | APPLICANT'S ARGUMENTS |
|--|---|--|
| 1. A tracking system for use with an identification medium to provide <u>time-limit access</u> to a resource, comprising: a transmitter module secured to the identification medium; a receiver module in selective communication with the transmitter module; | De La Hueriga discloses a tracking system for use with an identification medium to provide <u>time-limit access</u> to a resource, comprising: A transmitter module secured to the identification medium; (Column 9, lines 20-33). A receiver module in selective communication with the transmitter module; (Column 9, lines 34-49). | 1. De La Hueriga does not teach limited access to resources; it teaches an authentication method without means for temporally limiting access. |
| the transmitter module including an encryptor and a time generator that generates a <u>temporal sequence of values</u> (T_{Bn}), wherein the encryptor encrypts the temporal sequence of values (T_{Bn}) with a private key K_n , which is unique to the identification medium to generate a code list composed of encrypted code elements ($T_{Bn} K_n$), and wherein the transmitter module transmits one or more encrypted code elements ($T_{Bn} K_n$) to the receiver module; where the <u>time generator generates the sequence of values as timestamps</u> (Column 21, lines 45-50) & | The transmitter module including an encryptor and a time generator that generates a temporal sequence of values (T_{Bn}), wherein the encryptor encrypts the temporal sequence of values (T_{Bn}) with a private key K_n which is unique to the identification medium to generate a code list composed of encrypted code elements ($T_{Bn} K_n$), and wherein the transmitter module transmits one or more encrypted code elements ($T_{Bn} K_n$) to the receiver module; where the <u>time generator generates the sequence of values as timestamps</u> (Column 21, lines 45-50) & | 2. De La Hueriga does not teach how "time stamps" may be used to provide temporal limits on resource access. The " <u>time stamps</u> " taught in De La Hueriga are used to log data on the security card or as an audit tool for marking events and data recorded on the badge (Figure 10). |

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|---|--|--|
| module transmits one or more encrypted code elements $(T_n)K_n$ to the receiver module; and | (Column 19, lines 17-33), and <u>where the code list of encrypted elements is the list of the timestamps</u> and other information on the smartcard used to form the audit trail (Column 19, lines 49-64), and where this information is encrypted on the with the private key (Column 16, lines 7-15) | |
| a server, connected to the receiver module, for storing the private key of the identification medium, and including an authenticator that authenticates one or more of the <u>encrypted code elements of the code list</u> , where the private keys may be stored on a separate security verification system or on computer terminal 60, itself. (Column 12, lines 33-39). | A server, connected to the receiver module, for storing the private key of the identification medium, and including an authenticator that authenticates one or more of the <u>encrypted code elements of the code list</u> , where the private keys may be stored on a separate security verification system or on computer terminal 60, itself. (Column 12, lines 33-39). | |
| a server, connected to the receiver module, for storing the private key of the identification medium, and including an authenticator that authenticates one or more of the <u>encrypted code elements of the code list</u> ; and wherein the private key is available only to the server and to the identification medium, thus preventing an observer from identifying and tracking the identification medium. | | 3. <u>De LaHueraga authentication of the "timestamps"</u> as explained by the Examiner in connection with the previous element is not analogous to authenticating temporal sequences of values (t_n) that are encrypted with a private key K_n . |

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C. 1. De La Huerqa does not teach time-limited access to resources

As indicated in the title of the present application, in the specification, and in the claims, a distinctive and important feature is to provide time-limit access to resources. As an example, and as explained above in the "Brief Summary of the Present Invention," the present invention limits the time that a system may track an individual to business hours but not during lunch breaks. De La Huerqa does not teach time-limited access. In conclusion, the present invention teaches time-limited access to resources, while the relied upon reference teaches an authentication method without any means to temporally limit access.

C. 2. De La Huerqa's time stamps do not provide temporal limits on resource access.

De La Huerqa teaches limiting access to computer networks through cryptographic exchange (reference is made to Col. 4, lines 59-63), much like a password limits computer access. The "time stamps" taught in De La Huerqa (Col. 21, lines 48-50) are used to log data on the security card, for example associating a medication dispensation record with the badge wearer (Col. 22, lines 5-9). De La Huerqa does not teach how "time stamps" may be used to provide temporal limits on resource access. Rather, De La Huerqa teaches how "time stamps" may be used as an audit tool for marking events and data recorded on the badge (Figure 10).

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C. 3. De La Huerga authentication of the "timestamps" is not analogous to authenticating temporal sequences of values (TBn) that are encrypted with a private key Kn.

The Examiner states "where the code list of encrypted elements is the list of the timestamps", effectively equating (or analogizing) the encrypted elements with temporal sequences of values (TBn) that are encrypted with a private key Kn. However, as presented earlier, such analogy in hind sight is not appropriate.

More specifically, De La Huerga teaches a security badge that sends a key ID tag which a receiving station uses to locate a public key Identification signal (Col. 15 lines 56-61 and Col. 16 lines 12-14). An interrogation station can use the key ID to associate a person with a badge, and track the person without knowing their private key. The present invention sends an encrypted temporal sequence, which appears to the observer as a random number, and which does not contain a public ID, thus preventing an observer from identifying and tracking the location of a badge.

The "Background of the Invention" section of the present application clearly distinguishes over conventional systems (such as De La Huerga) that use public keys, and clearly indicates at page 13 lines 4-8 (of the present application), "that the signal or code transmitted by the badge Bn, includes the badge's time encrypted by the private key Xn, but does not include a public ID as was taught by conventional tracking systems. As a result, the encrypted code transmitted by the badge Bn can only be decrypted by a private, non-public key which is available only to the server 40 and to the badge Bn."

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To conclude, independent claim 1 is allowable for not being anticipated by De La Hueraga, and the allowance of claim 1 and the claims dependent thereon (Claims 2-19) is respectfully requested.

D. Independent Claims 21 and 23 in Light of De La Hueraga

Independent claims 21 and 23 are not anticipated by De La Hueraga for containing generally similar elements and limitations as in claim 1. As a result, claims 21 and 23 and the claims dependent thereon (claims 22 and 24-39) are allowable, and such allowance is respectfully requested.

Claims Rejection under 35 USC 103

Claims 10-18, and 32 were rejected under 35 U.S.C. 103(a) as being unpatentable over De La Hueraga. Applicant respectfully submits that this rejection is now moot since claims 10-18 depend on the allowable claim 1; and claim 32 depends on the allowable claim 23. Applicant respectfully requests that the allowance of claims 10-18, and 32 be confirmed.

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CONCLUSION

All the claims presently on file in the present application are in condition for immediate allowance, and such action is respectfully requested. If it is felt for any reason that direct communication would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned at the below-listed telephone number.

Respectfully submitted,

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